12.3.138 v2
12-7-54

Mechanical -
University Plumbing & Heating - Howard Cork

Electrical
Beverly-Travis - Chang

[illegible]

[illegible] FIBRE CO.

[illegible]

December 7, 1954

Process Mechanical Specifications

Longview Fibre Company

Seattle Box Plant

General Specifications

		Page
1.	Scope	1
2.	Ordinances and Permits	1
3.	Drawings	1
4.	Or equal	2
5.	Time of Completion	2
6.	Interference	2
7.	Final Acceptance	2
8.	Codes	2
9.	Guarantees	2

Equipment and Material

1.	Boiler	4
2.	Adhesive System	4
3.	Corrugator Steam System	6
4.	Space Heating and Humidifying	6
5.	Air Piping	7
6.	Gasoline Storage	7

Process Mechanical Specifications

Longview Fibre Company

Seattle Box Plant

General Specifications

1. Scope

   A. Make complete mechanical installation, connecting to all equipment shown on the drawings or called for in the specifications.
   B. Installation shall be done in a workmanlike manner and in accordance with the best practice of the trade.

2. Ordinances and Permits

   A. Follow City of Seattle Ordinances for all work.
   B. Laws, ordinances and codes take precedence over the plans and specifications.
   C. Take out and pay all permits and inspection fees required for the work.

3. Drawings

   A. The drawings are to some extent diagrammatic and do not attempt to show exact details nor all offsets in piping.
   B. Refer to the architectural, structural, and electrical plans for other details of the job affecting the mechanical work.
   C. When a discrepancy occurs between the plans and specifications, the owner shall be called upon for clarification before installation is made.
   D. The following drawings are a part of these specifications:

Drawing Number	Title
Lv. Fibre Co. 12983C	Floor and plot plan
Lv. Fibre Co. 13296C	Corrugator layout
B&W 5628-5-D	Boiler arrangement
B&W 5628-3A	Steel blow-off tank
B&W 5628-2A	Detail of supporting steel for Cochrane Deaerator
Cochrane F71,525	Cochrane Deaerator
Cochrane F69,612	Cochrane Zeo-Flo Softener
Lv. Fibre Co. 13396C	Fuel oil storage (Tank details)
Lv. Fibre Co. 13387C	Steam piping, A & B flute Corrugators
Lv. Fibre Co. 13388D	Steam piping, C flute and double facer
Lv. Fibre Co. 13389C	Steam and Condensate, overhead pipe lines
Lv. Fibre Co. 13264C	Plan View Layout, Starch system
Lv. Fibre Co. 13265C	Starch and silicate piping Corrugator supply and return lines
Lv. Fibre Co. 13266C	Starch storage tank piping
Lv. Fibre Co. 10062A	Mixing water batch control meter
Lv. Fibre Co. 13300B	Starch temperature control

Drawing Number	Title
Lv. Fibre Co. 13328C	Tank details, corrugating starch
Lv. Fibre Co. 13400C	Location and setting silicate and fuel oil storage
Lv. Fibre Co. 13420C	Fuel oil and silicate storage piping plan
Lv. Fibre Co. 13401C	Silicate storage tank details
Lv. Fibre Co. 13334C	Silicate tank and stand
Lv. Fibre Co. 13390D	Heaters, Humidifiers & Air lines
Lv. Fibre Co. 13406C	Gasoline storage tank
Lv. Fibre Co. 13407C	Gasoline storage tank setting and piping

4. Or Equal

A. Items of equipment or material designated in the plans or specifications by use of a specific manufacturer and number are so noted to indicate a standard of design, however, each class of fittings must be of a single make for parts interchangeability.

B. Where a substitution is proposed, the owner shall be the sole judge of its acceptability.

C. Where a substitution is proposed, state the addition or deduction to be allowed on acceptance of the substitution.

5. Time of Completion

Inasmuch as equipment will be arriving during February, March, April and May, it will be necessary for the mechanical contractor to coordinate his work with the general contractor and do a maximum of preparatory work and connect up machines promptly after installation.

6. Interference

A. Locate all piping to avoid conflict and interference with machines or overhead structures. (See corrugator elevation drawing #13296C.)

7. Final Acceptance

All steam, water, gasoline, adhesive and air lines are to be tested for leaks under their normal operating pressures and repair any leaks occurring.

8. Codes

All piping must comply with any local, state or ASA codes.

9. Guarantees

A. All work, material and equipment to be free from defects.

B. Correct defects and failures discovered within one year from date of final acceptance without cost to owner except when, in the opinion of the Engineer, such failure is due to neglect or carelessness by the owner.

C. The guarantee of the mechanical contractor is irrespective of shorter time limits by any manufacturer of equipment he has furnished.
D. Make all necessary adjustments during the first year of operation.

Equipment and Material

1. Boiler (Operating Pressure 175 psi)

A. Equipment furnished by Longview Fibre Company

(1) One (1) B&W FM9-26 factory assembled boiler including refractories and insulation, mountings, soot blower, feed-water regulator, forced draft fan, oil burner, Bailey automatic combustion control with integral oil pumping and heating set.
(2) Deaerator, softener, blow-off tank and other materials as listed in bill of materials, pages 11 and 12.
(3) One (1) 15 CFM air compressor - 40-80 psi.

B. Materials to be furnished by the mechanical contractor.

(1) One (1) oil tank (Dwg. 133960).
(2) Valves, traps, etc. as listed in bill of materials, page 12.
(3) Steam piping, see schedule on drawing 5628-5-D.
(4) Water, air and oil piping, see schedule on drawing 5628-5-D.
(5) Fittings, see schedule on drawing 5628-5-D.
(6) Pipe insulation, see schedule on drawing 5628-5-D.

C. Extent of Work

All equipment in the boiler room except for the air compressor and blow-off tank will be set by others; the air compressor and blow-off tank are to be set by the mechanical contractor.

The boiler and its auxiliary equipment is to be piped complete according to the drawings including steam, water, oil and air piping.

The concrete anchor for the oil storage tank will be built by the general contractor; installation and backfilling is to be done by the mechanical contractor.

The tank is to be set according to the drawings and the following piping is to be installed: (1) oil supply line; (2) oil return line; (3) steam to oil tank heating coils; (4) condensate return to blow-off tank.

All steam piping within the boiler room is to be insulated as indicated on B&W drawings. The steam line to the oil tank also will be insulated as shown.

2. Starch and Silicate System

A. Equipment furnished by Longview Fibre Company.

(1) One (1) secondary mixer including agitator.
(2) One (1) primary mixer including agitator.
(3) Two (2) side entering agitators for starch storage tanks
(4) Eight (8) Viking pump and motor sets, operating pressure 35 psi.

B. Equipment to be furnished by mechanical contractor.

(1) Two (2) starch storage tanks (Dwg. 13328C).
(2) One (1) score tape adhesive tank (Dwg. 13328C).
(3) One (1) silicate tank and stand (Dwg. 13334C).
(4) One (1) silicate storage tank (Dwg. 13401C).
(5) One (1) 55 gal. drum for starch temperature control (Dwg. 13300B).
(6) Valves as listed in bill of materials, pages 8 and 9.
(7) Adhesive piping, 35 psi, temperature 110° F. maximum.
(8) Steam piping, 175 psi, temperature 377° F.
(9) Special valves, meters and controllers as specified in the bill of materials, pages 8 and 9.
(10) Fittings, steam 300# M.I.
(11) Fittings, water and adhesive, 150# M.I.
(12) Pipe hangers.
(13) Two (2) centrifugal pumps for starch temperature control.
(14) Two (2) warming coils for starch storage tanks, approximately 5'6" O.D.

C. Platforms to be built by the general contractor.

(1) Two (2) wooden platforms 7'0" Ø for starch storage tanks.
(2) One (1) wooden platform 5'0" Ø for score tape adhesive tank.
(3) One (1) working platform.

D. Extent of Work.

(1) Starch system.

The general contractor will build in the field three wooden support platforms. Two platforms 7'0" Ø and one platform 5'0" Ø for the two starch storage tanks and the score tape adhesive tank. The platforms are to be approximately 12" high so that the tank outlets are accessible.

The mechanical contractor will make complete mechanical installation of all the tanks and pumps including the agitators, and primary and secondary mixers.

All tanks, pumps and mixers are to be piped as shown on the drawings including corrugator supply and return lines. Piping is to be supported by hangers as required.

The mechanical contractor will furnish one 55 gallon open top oil drum and provide outlet connections as shown on drawing 13300B. The tank is to be mounted on top of the starch storage tank and piped as shown.

A wooden working platform is to be built by the general contractor in the field around the entire starch system assembly.

(2) Silicate System.

The mechanical contractor will make complete mechanical installation of the silicate storage tank, silicate overhead tank and stand, and silicate supply pump. The tanks and pump are to be piped complete including supply and return lines to the corrugators. Hangers are to be provided as required.

The general contractor will build the concrete saddles for the storage tank.

3. Corrugator Steam Piping

A. Equipment to be furnished by Longview Fibre Company.

(1) Valves, fittings, traps, flow regulators, strainers as listed in the bill of materials, pages 1, 2 and 3.
(2) One (1) condensate booster pump.

B. Materials to be furnished by the mechanical contractor.

(1) Valves, traps, flow regulators, strainers as listed in the bill of materials, pages 4, 5, 6, and 7.
(2) Steam piping - 175 psi 377° F.
(3) Fittings 300# M.I.
(4) Pipe insulation, 85% magnesia.
(5) Pipe hangers.

C. Extent of Work.

Complete steam piping installation is to be made according to the drawings to all units. Hangers are to be installed as required, and all pipe except for the condensate return line and low pressure return line are to be insulated with 85% magnesia pipe insulation.

4. Space Heating and Humidifying

A. Equipment furnished by Longview Fibre Company.

(1) Five (5) unit heaters complete with high pressure floats and thermostatic traps, strainers and thermostats.

B. Equipment to be furnished by the mechanical contractor.

(1) Four (4) humidifiers.
(2) Valves as listed in bill of materials, page 10.
(3) Fittings - screwed, banded, M.I. 300#.
(4) Steam piping - 175 psi, 377° F. to heaters, 10 psi to humidifiers.
(5) Pipe insulation.

C. Extent of Work

(1) Complete mechanical installation of 5 unit heaters, including hanging of the heaters, steam and condensate piping and insulation of the steam line. Support pipe by hangers as required.

(2) Complete mechanical installation of 4 humidifiers, including mounting of the humidifiers, and steam and condensate piping. Steam line is to be insulated and all piping supported by hangers as required.

5. Air Piping

A. Equipment furnished by Longview Fibre Company

(1) One (1) 25 CFM air compressor - factory air 60-80 psi.

B. Material to be furnished by mechanical contractor.

(1) Pipe.
(2) Valves as listed in bill of materials, page 10.
(3) Fittings - 150# M.I.

C. Extent of Work

Make complete mechanical installation of the 25 CFM air compressor including piping as shown. Provide hangers as required.

Make complete piping installation from the boiler room compressor to the A, B and C flute corrugators as shown on the drawings.

6. Gasoline Storage

A. Equipment furnished by Longview Fibre Company.

(1) One (1) Gilbarco gasoline pump.

B. Equipment furnished by the mechanical contractor.

(1) One (1) gasoline storage tank.
(2) Pipe

C. Extent of Work

Set the gasoline storage tank as shown on the drawings and make complete piping installation, including gasoline pump, supply line and vent line.

The general contractor will build the concrete anchor for the storage tank; installation and backfilling by the mechanical contractor.